



US009926432B2

(12) **United States Patent**
Rufner et al.

(10) **Patent No.:** **US 9,926,432 B2**
(45) **Date of Patent:** ***Mar. 27, 2018**

(54) **ANTIOXIDANT STABILIZED CROSSLINKED
ULTRA-HIGH MOLECULAR WEIGHT
POLYETHYLENE FOR MEDICAL DEVICE
APPLICATIONS**

(58) **Field of Classification Search**

None

See application file for complete search history.

(71) Applicant: **Zimmer, Inc.**, Warsaw, IN (US)

(56)

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(21) Appl. No.: **14/983,006**

(22) Filed: **Dec. 29, 2015**

Primary Examiner — Robert C Boyle

(74) *Attorney, Agent, or Firm* — Schwegman Lundberg & Woessner, P.A.

(65) **Prior Publication Data**

US 2016/0145416 A1 May 26, 2016

Related U.S. Application Data

(63) Continuation of application No. 14/157,708, filed on Jan. 17, 2014, now Pat. No. 9,265,545, which is a (Continued)

(51) **Int. Cl.**

C08J 3/24 (2006.01)

C08K 5/1545 (2006.01)

(Continued)

(52) **U.S. Cl.**

CPC **C08K 5/1545** (2013.01); **A61B 17/8085** (2013.01); **A61L 27/16** (2013.01);

(Continued)

(57)

ABSTRACT

An antioxidant combined with UHMWPE prior to subjecting the UHMWPE to crosslinking irradiation. In one exemplary embodiment, the antioxidant is tocopherol. After the antioxidant is combined with the UHMWPE, the resulting blend may be formed into slabs, bar stock, and/or incorporated into a substrate, such as a metal, for example. The resulting product may then be subjected to crosslinking irradiation. In one exemplary embodiment, the UHMWPE blend is preheated prior to subjecting the same to crosslinking irradiation. Once irradiated, the UHMWPE blended product may be machined, packaged, and sterilized in accordance with conventional techniques.

18 Claims, 3 Drawing Sheets

